

of the work which relates to the English judges, and the results are most interesting.

The common notion is that ability is irrespective of descent; that genius starts suddenly into existence and disappears with equal abruptness, and that, therefore, all families have equal chances of turning out eminent men. Mr. Galton denies every one of these propositions, and appeals to the history of 286 of the first judges of England, embracing a period from the restoration of the monarchy in 1660 to 1865. As regards the fact of the eminent ability of these men, we are reminded that they held the foremost places in the vast body of the legal profession. They are taken from three thousand lawyers, who are themselves selected men, and it is from those, by a process of re-selection, that the judges are mainly derived. "The majority of English judges belong to a strongly-marked type. They are not men who are carried away by sentiment, who love seclusion and dreams, but they are prominent members of a very different class, one that Englishmen are especially prone to honor for at least the six lawful days of the week—I mean that they are vigorous, shrewd, practical, helpful men; glorying in the rough-and-tumble of public life, tough in constitution and strong in digestion, valuing what money brings, aiming at position and influence, and desiring to found families. The vigor of a judge is testified to by the fact that the average age of their appointment in the present reign has been fifty-seven. The labor and responsibility of the office seem enormous to lookers-on, yet these elderly men continue working with ease for many more years; their average age at death is seventy-five, and they commonly die in harness. Now, are these remarkable gifts and peculiarities inherited by their sons? Do the judges often have sons who succeed in the same career, and whose success would have been impossible if they had not been gifted with the special qualities of their fathers?"

In answer to these questions Mr. Galton states that of the 286 judges no less than 133, or nearly one-half, had one or more kinsmen of little or no less eminence than themselves. There are no less than ten families where both father and son are English judges, and the same number of other families where either the father or the son is an English judge, and the son or the father is a high legal officer. There are five pairs of judges who are brothers, and seven other judges who had brothers, in high legal offices. In short, out of the 286 judges more than *one in every nine* of them have been either father, son, or brother to another judge, and the other high legal relationships have been even more numerous. It is furthermore significant that the judges of the very highest ability—the lord-chancellors—illustrate the connection of blood and talent still more impressively, twenty-three out of the thirty lord-chancellors having had kinsmen of exceptionally high ability.

If we now take the question in another aspect, as respects the number of persons of distinction appearing in a family, the case becomes still more striking. According to the common doctrine that ability is fortuitous and wholly unconnected with breed, we are far within bounds in assuming that it is ten to one, against a man of judge-like ability being born in any one family. On this supposition there would be found only one family in one hundred that contained two eminent men, one in one thousand that contained three, and one in a million that contained six. But how does this compare with the families of the judges? Mr. Galton says that the 133 English judges, who have eminent legal relations, may be grouped into ninety-five families, and that of these there are thirty-eight cases of two eminent men in one family; forty cases of three; five cases of four or five, and six cases of six or more. In view of these facts Mr. Galton remarks: "It is therefore evident beyond the possibility of doubt that ability is not distributed hap-hazard, but that it clings to certain families."

We cannot here give the evidence of the larger generalization that ability is gradually built up, so to speak, by degrees in the ancestry, and conversely is dispersed by degrees in the descendants. Mr. Galton remarks that "it rises in a gradual and exceedingly regular curve out of the ordinary level of family life. There is a regular increase of ability in the generations that precede its culmination, and as regular a decrease in those that succeed it. In the first case the marriages have been consentient to its production; in the latter they have been incapable of preserving it. After three successive dilutions of the blood the descendants of judges appear incapable of rising to eminence. These results are not surprising when compared with the far greater length of kinship through which features or diseases may be transmitted. Ability must be based on a triple footing, every leg of which

HEREDITARY GENIUS.

IT is well known that in the realm of horsehood there is a close relation between breed and speed; does this law of transmitted qualities extend to man and to the mind of man? Are those higher mental traits, which we name talent or genius, inherited like physical peculiarities? A negative answer has been usually given to this question, and everybody can cite instances of gifted parents having mediocre children, which are held as justifying disbelief in the doctrine. It begins, however, to be suspected that the old and prevalent idea is an incorrect one, and must soon be consigned to the category of "popular errors." The recent assiduous study of biological science, the aim of which is to unfold the laws of life, has thrown important light upon the subject of hereditary transmission, and yields accumulating proof that mind forms no exception to the general law.

Mr. Francis Galton, a distinguished English scientist, who has devoted many years to the investigation of the subject, maintains that the principle of the descent of high mental character admits of full proof, and he is about to publish a work in which the question is to be systematically treated, and which will probably go far toward revolutionizing current opinion with reference to it.

In an article in *Macmillan's Magazine*, for March, Mr. Galton fore-shadows his method of investigation. It embraces first an historic inquiry into the hereditary relations of eminent men in England—its illustrious judges, statesmen, commanders, those distinguished in literature and science, poets, painters, musicians, divines, and scholars. This will be an extensive examination of data, and will be independent of all theory. Having established his case in this manner, he will proceed to an analysis of the question with a view to explanations and the determination of principles. In his article he anticipates that portion

has to be firmly planted. In order that a man should inherit ability, in the concrete, he must inherit three qualities that are separate and independent of one another. He must inherit capacity and zeal and vigor; for, unless these three, or, at the very least, two of them, are combined, he cannot hope to make a figure in the world. The probability against inheriting a combination of qualities not correlated together is necessarily far greater than it is against inheriting any one of them."
